

## ABSTRACT

To improve chemical resistance and heat resistance of an electromagnet core used for a liquid fuel injector.

A core is formed by using a binder for a soft magnetic powder, wherein the binder is made of a polyimide resin having a molecular structure having a thermal and chemical stability. A volume ratio of the binder made of the polyimide resin to the soft magnetic powder is in a range of from 0.05 wt% to 1.0 wt%. Since the heat resistance and the chemical resistance of the core can be improved, the core can be used for a valve control electromagnet used for a liquid fuel injector and effectively operated when the core is attached to an engine.